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Wire Industry

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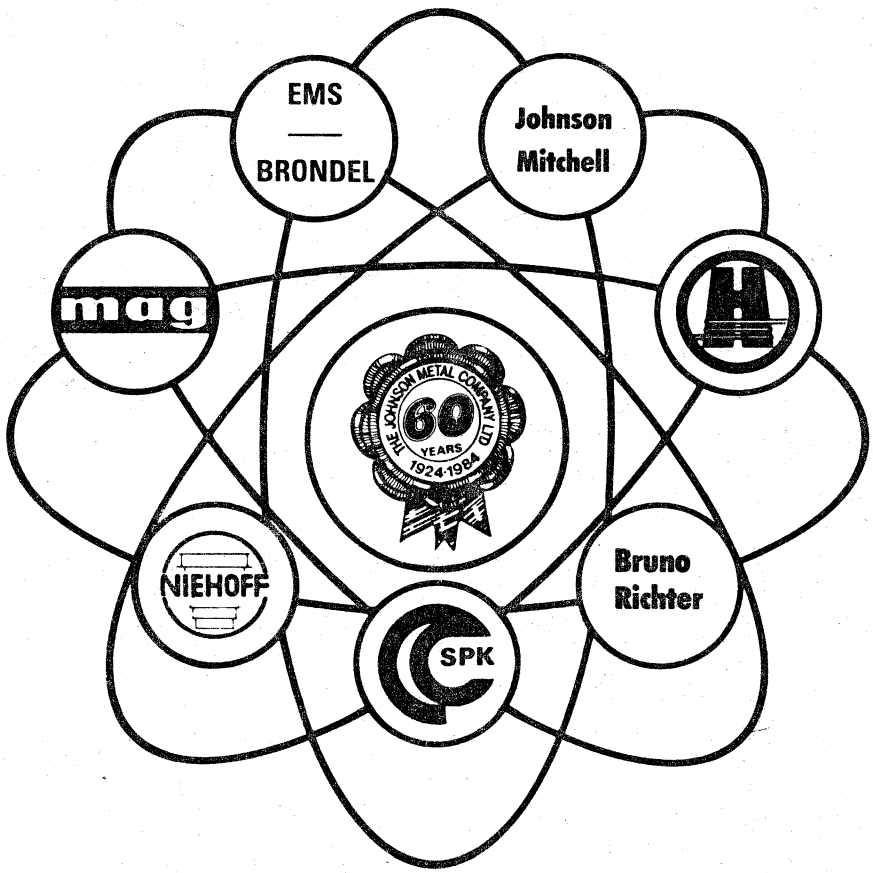
SIXTY YEARS OF INTEGRATED SERVICE



'The Specialists'

THE JOHNSON METAL CO LTD

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Sixty years of service to the wire industry

**T D Robinson, Managing Director,
The Johnson Metal Co Ltd,
Manchester, England**

This month The Johnson Metal Co Ltd is celebrating 60 years of business in the wire industry.

The company was incorporated on February 5, 1924, to purchase the business previously run by Mr Harold Johnson, who was related to a manufacturer of steel wires. He was a textile man who was visiting Leipzig on business and made the acquaintance of a gentleman by the name of Herr Walter Nacken. Herr Nacken was at this time the manager of the firm Kratos of Leipzig, who were very well known wire drawing machinery manufacturers.

For reasons unknown, Harold Johnson returned from Leipzig to England with an agency agreement to sell Kratos machinery in Great Britain and America. Apart from family connections, Harold Johnson had very little knowledge about wire drawing. However, he was acquainted with an engineer by the name of John S Waters, father of the present Jack Waters, and persuaded him to join him in this venture and thus The Johnson Metal Co Ltd was formed. It is interesting to note that on that same date Greenwich Mean Time (the pips) was introduced on the 'wireless'. Another interesting point was that the price of copper wire bars had risen to £66.25p per ton and tin had climbed to £257.13p. Mr Ghandi had been released from prison, and the world was mourning the death of ex-President Wilson.

In 1926 the company had an agency agreement with Vereinigte Ziehsteinfabriken Urbanek Diener und Krause. The agreement covered Great Britain and all British Dependencies with the exception of Canada, quite some area in those days!

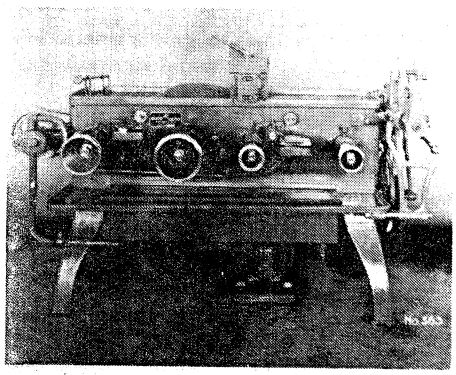

Fig 1 Kratos L VI multi-die wet machine with 6 lb spooler

This connection still exists with Joh Urbanek but only for the United Kingdom for the sale of natural diamond and synthetic diamond wire drawing dies.

By this time Kratos had introduced multi-die wire drawing machines which were of a revolutionary design compared to the single hole 'wortle plate' machines. Drawing speeds were high at 20m/sec for copper and 7.5m/sec for ferrous applications. The British market soon realised the value of the new technology and were not slow to make use of it.

This new machinery with its multi-die drawing and higher speeds brought problems which had not been encountered before, in that with the higher speeds it would be desirable to have larger piece weights for continuous operation. In the late 1920s a Mr Schlatter of Switzerland had designed and manufactured two models of electrical resistance welding machines, namely type S and type E, for joining the ends of wires. He decided that the best marketing policy for his machines was through agencies already selling wire drawing machines. He therefore appointed Suermondt & Dumont of Paris, C Rondorf of Stockholm, Ernst Gruener of Vienna and in 1932 The Johnson Metal Co Ltd, Manchester, as his selling agents.

During the war that followed in 1939 many difficulties were experienced in importing these resistance welders. Therefore a decision was made by Johnson Metal to have these manufactured in Great Britain. That arrangement still exists and Models SG and EH are produced and sold by Johnson Metal. Agents have been appointed in most major countries including C Rondorf of Sweden, one of the original sales agencies. Records show sales of many hundreds of these machines around the world.

By 1925 the company was very well established in the wire trade and the sales of Kratos machines were growing well. Companies such as Joseph Sykes Bros, Thomas Holdsworth, British Ropes, Harding Rhodes, Richard Johnson & Nephew, W T Glover, Callenders Cable Co, and Dunlop to name only a few had purchased Kratos machines through Johnson Metal. It is interesting to note that Joseph Sykes Bros purchased a Kratos 6 block steel wire drawing machine for the princely sum of £1240 according to the 1935 sales ledger, and that Harding Rhodes purchased a Kratos EA-1V9 hole machine for the considerable sum of £560. Spare parts stocks according to figures for 1934 were put at £1584. By 1973 this figure had risen to £36,000 up to the present-day value of £75,000.

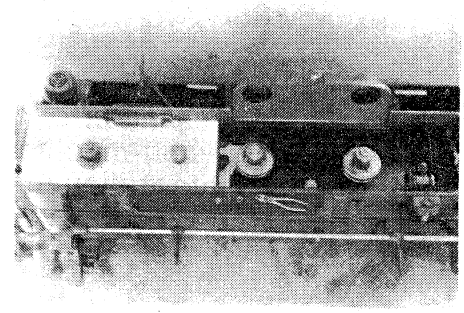

Fig 2 Submerged multi-die wet-drawing machine for galvanised wire

Competition was increasing all the time both on the home front as well as from abroad. It is recorded that a certain gentleman from the wire industry spent a long time at the Kratos factory in order that he could absorb the new technology of multi-hole machines, to benefit his employer who was a wire producer. Shortly after his return a British company commenced manufacturing machinery similar to that of Kratos. Another company in the North of England also produced a machine more than similar to the Kratos model HSK. It was so similar that even the castings carried the same pattern numbers! Today's plagiarists are a little more subtle, but only just.

High technology which increases your production capacity!

The "more" of productivity which is decisive: more capacity, more quality, more profitability...

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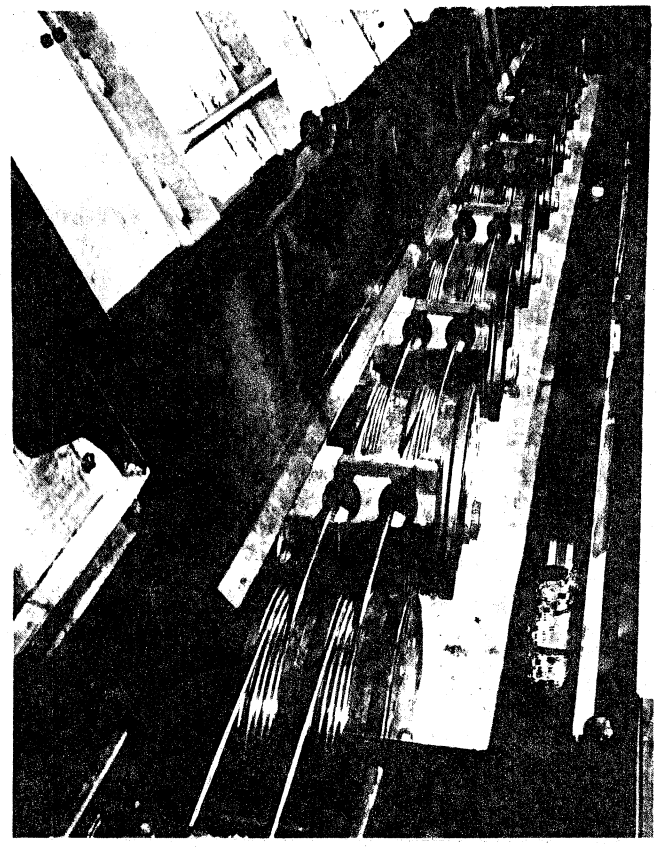

An example:

The M 85, the most-sold rod-break-down machine for non-ferrous metals, also approved as two-wire drawing machine Duplex MM 85. Two-wire drawing machine means DOUBLE EFFICIENCY!

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A "more" of efficiency at the latest level of technique: to produce with the highest possible profitability, to work still more economically... Talk to the Niehoff sales engineers with regard to your possibilites and to our machines and systems.

Technical data:

Inlet diameter:	2 x 8 mm copper wire
Finished diameter:	2 x 1.0..... 3.8 mm
In case of single-wire production accordingly thicker sizes.	
Drawing speed:	max. 31.5 m/s
Wire production:	63 meters per second
Drive power:	420 kW

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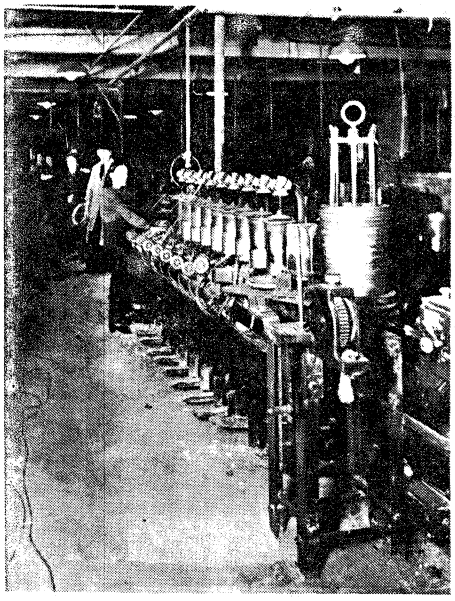

Fig 3 Kratos EAIV 10-die overhead accumulation machine as originally supplied to Thomas Holdsworth

During the war years both Kratos and Urbanek machines were produced by Johnson Metal with the help of subcontractors. Mr Waters was appointed diamond die controller for Great Britain and ironically his close friend Mr Urbanek was appointed diamond die controller for Germany.

Harold Johnson died in 1946 and Jack Waters was persuaded by his father, John S Waters, to join the company as manager.

In 1950 came the death of John Waters thus removing the other direct link with the pre-war organisation.

At this time Walter Nacken was still building Kratos machines in what is today termed West Berlin, having fled to the Allied Sector penniless in 1945. Johnson Metal were still making and selling a few Kratos machines, although for one particular order for Connollys they had to use the services of Barron & Crowther to manufacture 17 Kratos LV1 machines with 30 lb spoolers instead of the 6 lb spoolers normally used by Connollys.

In the late 1940s the two Niehoff brothers Walter and Herbert had married the two Bauer sisters, Mr Bauer being involved in the manufacture of simple types of wire drawing machines.

Walter Nacken, ex-Kratos, had by this time run into considerable financial difficulties and was persuaded by the brothers Niehoff to join them. Shortly after that the firm Maschinenfabrik Niehoff KG was established. Some little time after this, Walter Nacken invited Jack Waters to Paris for a discussion, and there he also met Herbert Niehoff. This was the beginning of a very successful agency agreement which has become more and more consolidated as the years have passed. Success came very quickly as Niehoff realised that the wire drawing machine was only as good as the spooler behind it.

They introduced their SO50 spooler with its own dc drive capable of taking 100 lb spools.This was the real beginning as customers realised the value of such a spooler, and they began to purchase them to place behind competitors' drawing machines, Robertson at this time being the strongest competition.

Eric Wagstaff joined the Johnson Metal Co in 1953. He was previously works manager with the Sheffield Smelting Co Ltd and assumed the responsibility for Niehoff sales enabling Jack Waters to concentrate on the Schlatter range of equipment which included mesh, projection and spot welders. Sales of Schlatter equipment grew and in 1977, by mutual agreement with Johnson Metal, it was decided by Schlatter to open their own offices to service the United Kingdom.

Fig 4 Delegates at the symposium held at Feldmühle in 1978

The team of Eric Wagstaff and Siegfried Schröder of Niehoff proved very successful, resulting in orders for 46 machines for BICC Prescot and 16 intermediate machines for AEI. Further machine orders followed from companies such as Pirelli, F D Sims, Connollys, A C Scott, LEW and Delta to name only a few. By the early 1960s Johnson Metal had established itself as a leading supplier of high quality machinery. The first Niehoff rod-breakdown machine was installed at Derby Cables (now Crompton Parkinson) in 1965 which is still running today. Orders followed for more rod machines from AEI, Pirelli and BICC. Niehoff had by this time produced the world's first successful double spooler for continous operation of rod machines.

In the 1960s ceramic drawing cones were beginning to be accepted in the industry and Johnson Metal made a sales agency agreement with Feldmühle AG. This resulted in a very successful market which still exists today and Feldmühle supply not only aluminium oxide ceramic cones and rings, but also zirconium oxide products particularly suitable for drawing ET wires. Cones and rings are available for superfine machines up to rod machine rings 450mm dia.

To promote the sales of the new ceramic, in 1978 Johnson Metal in co-operation with their principals organised an 'in house' symposium at the factory of Feldmühle in Plochingen near Stuttgart. An aircraft was chartered from British Midland Airways and some 75 representatives from the wire drawing industry attended this most successful function. Zirconium oxide is now firmly established in the wire drawing industry as the best wear resistant material for drawing cones and rings.

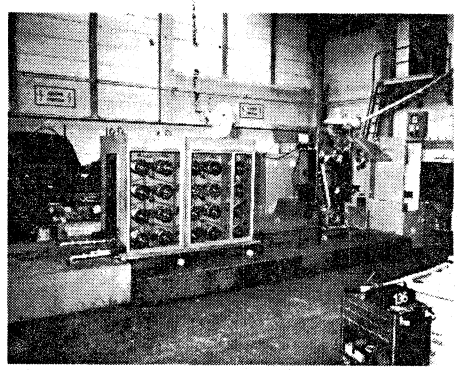

Fig 5 Niehoff MZE 201 multi-line machine with annealer and spooler

From the middle 1960s the company's growth was quite considerable and during 1965 Mr R A Breton, chartered accountant and son-in-law of Jack Waters, joined the company. With the growth of the company and being in the middle of a Sterling crisis, faced with devaluations, floating currencies, import surcharges, growing documentation for customs and excise, company tax, etc., stricter methods of accountancy and administration were introduced by him. Tragically Bob Breton in the spring of his career was killed in an aircraft accident outside Paris in March 1974. He had been following his favourite past-time and hobby, Rugby Union, and was returning to Manchester via London from Paris after watching the France v England game.

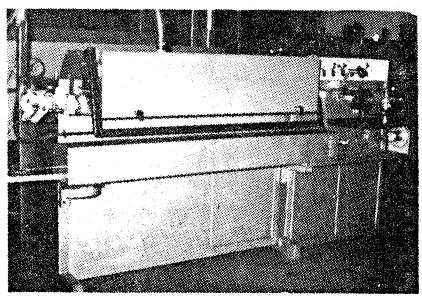

Fig 6 MAG horizontal wire enamelling machine

Fate at this time seemed to be against the continuation of Johnson Metal, as shortly after this tragic accident the death occurred of Eric Wagstaff. This was a double blow for the company. Nevertheless, under the direction of Jack Waters,

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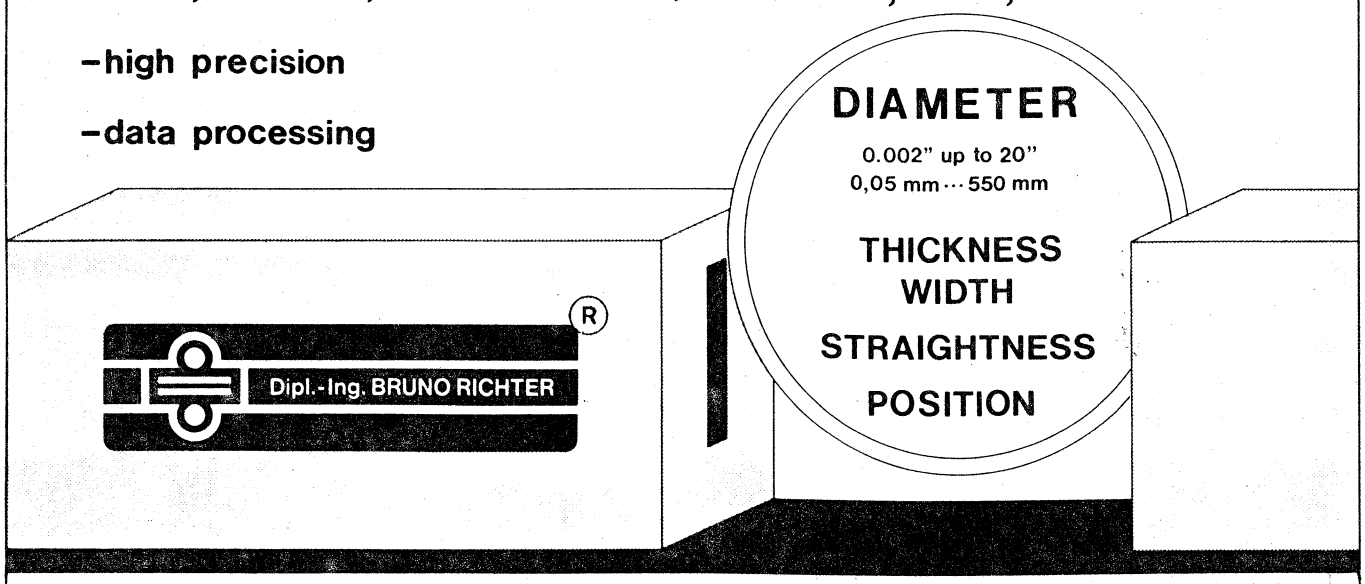

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T D Robinson

the day-to-day business was resumed, with the excellent help of their principals and such individuals as Walter Niehoff and Seig. Schröder, Heinz Eichas of Feldmühle and, of course, not forgetting the many old customers who showed great tolerance of the situation. Their offers of help will always be remembered.

Resulting from the merger of Niehoff and Herborn, Johnson Metal also became responsible for the sales of Herborn machinery for steel wire drawing. In 1970 Terry Robinson was employed by the company as assistant to Eric Wagstaff and these duties were given to him.

After the death of Eric Wagstaff he took over responsibility for all wire drawing equipment and accessories. A decision was made to bring in new sales staff and to look into widening the base of the company for wire and cable machinery. Howard Nutall was employed and some little time later Colin Burcham. The company ventured into the cold heading machinery market but because of the rapid decline in this sector of the British Industry it was decided to discontinue this programme.

Still looking for expansion, Terry Robinson was approached by the Austrian company MAG in 1976 and an invitation was given to him by Mr Franz Trattler to visit them in Graz for discussions regarding the UK sales of enamelling machinery. This resulted in a most successful sales co-operation between the two companies and sales have been made to Pirelli, Enfield Winding Wires, LEW, F D Sims, Kent Electric Wire, BICC, Concordia and Thames Electric Wire, of horizontal and vertical enamelling machines. The success in the enamelled wire machinery market was achieved because of the new technology which MAG had developed and without

L Chernick

doubt from the back-up received from the technical sales team including such people as Bruno Kraker, Horst Schmidt and Adolf Furian. Not satisfied with this success, again the companys' sales base was looked at to see where possible expansion could be achieved, but still keep within the companys' technical field of wire, cable and cold metal drawing.

Two areas were investigated, ie the tube industry and the cable making industry.

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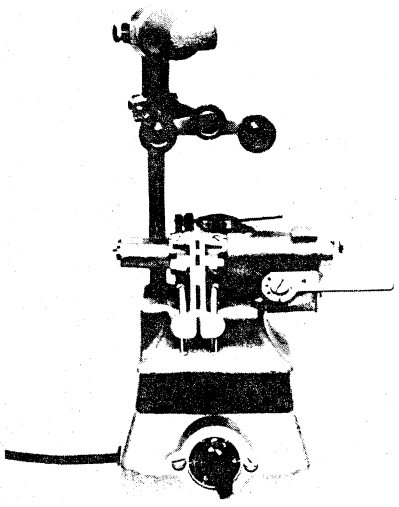

- Simple to Operate.
- Suitable for various materials.
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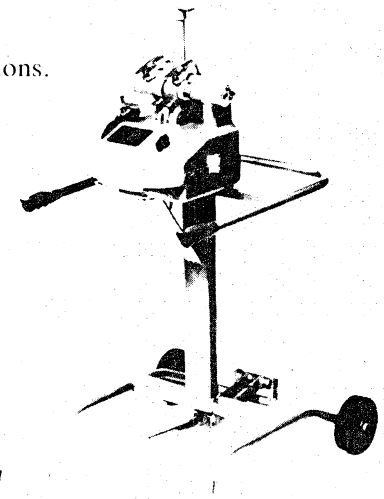

Model SG
0.315-1.829 mm

Model EH
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... from rod break down to super fine.

Feldmühle Aktiengesellschaft

H S Nuttall

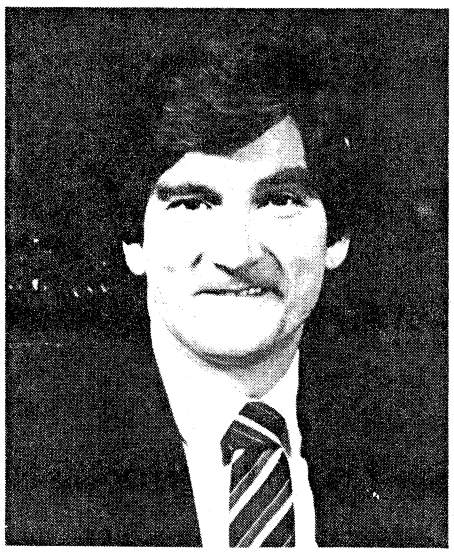
Johnson Metal decided to divert some of their sales programme into the tube industry. They had already sold many Krollmann squeeze type pointing machines to such companies as Yorkshire Imperial Metals, Delta, Serck and Tube Investments. In 1977 a need was seen in the tube industry for pointing machinery to give heavy reductions on thick wall shells prior to drawing. It was with this in mind that Terry Robinson made his first visit to the USA for discussions with the push pointing machine manufacturer George A Mitchell. Immediately at the first meeting with George Mitchell and Peter Alexoff a good relationship was formed. Johnson Metal then became agents for the Mitchell push pointing programme.

Chartered accountant Laurence Chernick joined the company in 1977 to take over the duties of company secretary. By this time Niehoff had introduced to the cable market another original idea, that of multi-line drawing machines with 8 and 10 wires being drawn, annealed and spooled simultaneously for the production of flexible cables. This was the biggest step forward in the wire drawing industry since the introduction of the high speed Kratos machines in the late 1920s. However, it goes without saying that Niehoff suffers from the same problem that Kratos did, one of copying by competitors.

In 1979 Messrs Robinson and Chernick were appointed directors of Johnson Metal.

In 1980 Jack Waters (Managing Director) made the decision to retire from Johnson Metal company activities and the company's shares were re-distributed. Terry Robinson was appointed Managing Director with Laurence Chernick as Director of Finance and Company Secretary. To give the company a firmer base for the future two further directors were appointed, Howard Nuttall and Colin Burcham, both completely different characters but each contributing to the company in their own individual ways.

C L Burcham



G Hughes

Recently a decision was made to form a joint UK company between George A Mitchell and Johnson Metal to manufacture the Mitchell range of tube pointing machines for the European market, with sales being carried out by Johnson Metal. The new company which has been formed is called Johnson Mitchell Ltd and will be able to service the European market more easily and administer marketing of the equipment more economically because of geographical advantage.

The company now also has the services of Mr Graham Hughes, who is there to provide after sales and commissioning services.

A Brocklehurst

Graham is well experienced in providing technical services to customers on both wire and cable machinery and is very well versed in the field of electronics. His experience with wire and cable machinery has been built up over many years with BICC, Connollys and Ward & Goldstone.

The latest addition to the Johnson Metal sales team is Alan Brocklehurst, who is well known in the cable manufacturing industry. Alan started his duties with Johnson Metal in April 1983 because of his knowledge and experience in the industry and because of the merger of Brondel into the EMS Group of companies. He has taken control of the sales of the whole of the cable machinery programme for EMS which includes Andouart extruders, Brondel stranding, rotating and take-up machinery and Decombe coilers etc.

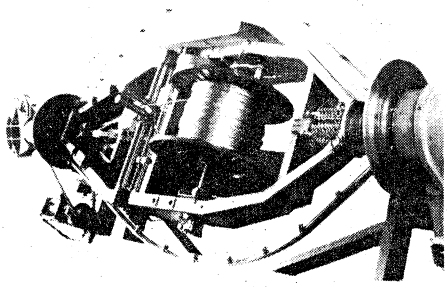


Fig 7 Brondel double twist buncher model DT16

Recently the company has invested in a computer and word processor to bring itself into line with modern business practices. This will be a tremendous help with accounts and spare parts servicing.

No doubt as technology changes this will bring its own related problems, which JMC will overcome assisted by the first class 'back-up' from their principals which they have experienced over many years.

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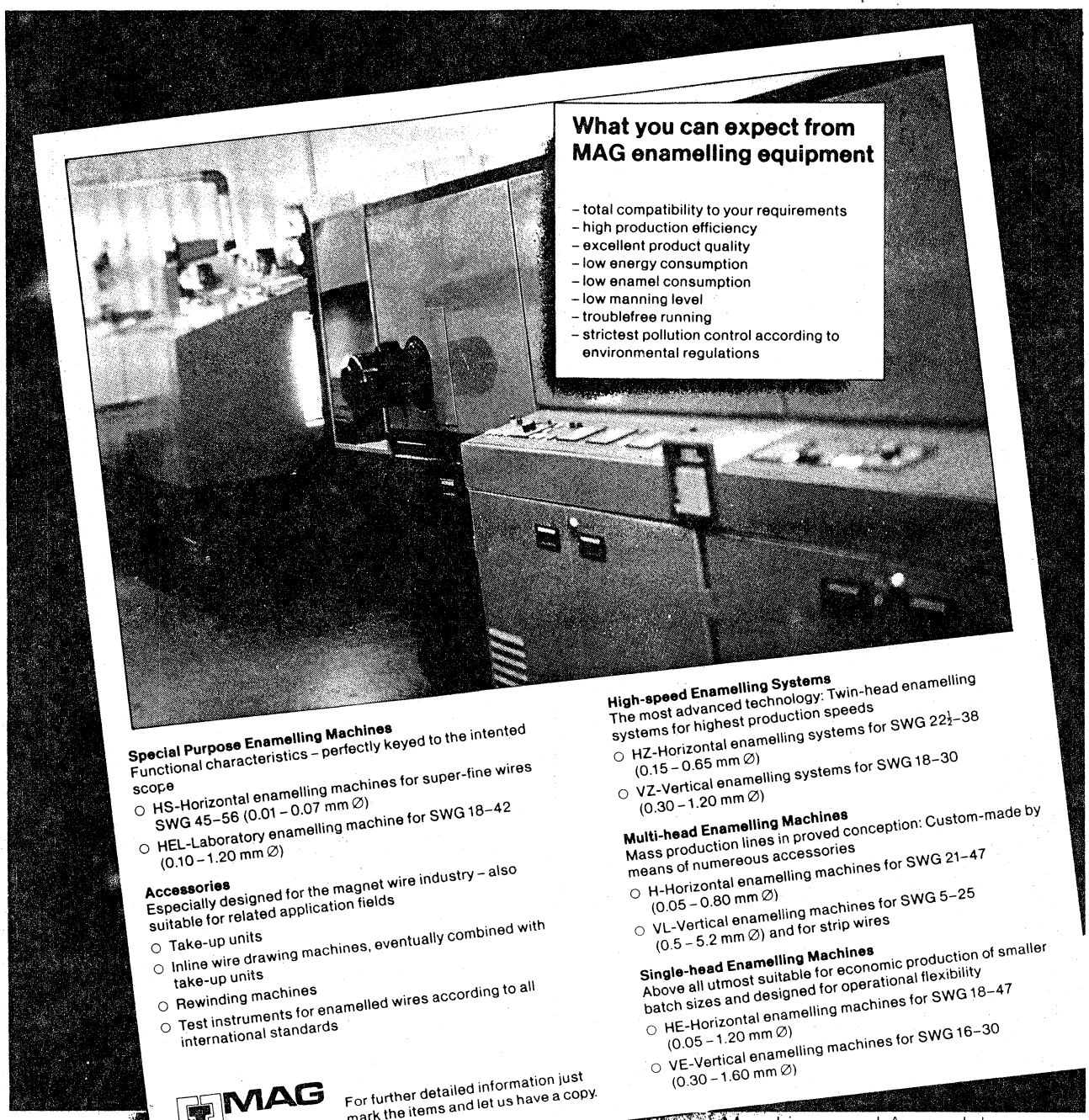
WIRE ENAMELING EQUIPMENT



What you can expect from MAG enamelling equipment

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- high production efficiency
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Functional characteristics – perfectly keyed to the intented scope

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Above all utmost suitable for economic production of smaller batch sizes and designed for operational flexibility

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- ○ VE-Vertical enamelling machines for SWG 16–30 (0.30 – 1.60 mm Ø)

MAG

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